

BASIS FOR CLAIM AMENDMENTS**Basis of the amended descriptions in Claim 1**

(1) Concerning the amendment regarding solid and/or hollow continuous filaments and/or short filaments

According to the amendment, the Examiner's concerns that h that "the term "short filaments" in line 7 is a relative term which renders the claim indefinite." has been addressed by the removal of the indicated term from the claims.

(2) With regard to the inclusion of placing the three-dimensional structure in a female die, the inclusion is supported by Figs. 5, 6, consequently, no new matter is added therein.

(3) Concerning the amended description in claim one of heating at least the female die to a temperature sufficiently high to soften the three-dimensional structure in the female die;

This inclusion is supported by the specification at Page 17, Line 7 to Page 18, Line 3 of the English text of the present invention where it indicates a female die is heated, thereby a three dimensional structure in the female die is heated. A male die is inserted in the heated three dimensional structure, thereby the male die is heated, then the three dimensional structure is compressed. Thus no new matter is added therein.

SECTION 112

The concerns regarding section 112 have been addressed by the amendments to the claims.

The rejection regarding "the recitation of "a male die or a female die, or a female die and/or the three-dimensional structure" at Page 3, lines 9 and 10 of the outstanding Office Action, regarding clarity of requirements, has been respectfully traversed by these amendments as well as the indication that there is insufficient antecedent basis for these limitations in the claim.

Concerning the amended description of "setting a volume of a cavity of the female-die so that a length of a stroke including at least the longest stroke of the male-die when the male-die is entered into the cavity to a deep level," it is not necessary to explain that a length of insertion of the male-die when the male-die is entered into the cavity to a deep level is "the longest" stroke of the length, thus, according to the description of Page 20, Lines 12 to 19 of the English text of the present invention, the length of the stroke is set as an upper limit, and the male-die is inserted in the female-die by the optional length smaller than the length of the upper limit so as to adjust the thickness of the three-dimensional structure.

Furthermore, the description "the male die consisted of a base which forms a part of the product" is based on the description of "The "male die" preferably consists of a product (base) to which the cushion material can be attached. Then, need

for separate preparation of a male die can be safely avoided, which will allow the molding cost to be reduced, and precision of molding to be improved. " in Page 8, Line 27 to Page 9, Line 4 of the English text of the present invention, and Figs. 5 to 8. Thus, no new matter is added in the added description.

Finally, original claim 3 is deleted according to the amendment of Claim 1. Thus, the rejection such that "Claim 3 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Ebihara et al. as applied to claim 1 above, and further in view of Jang (US Patent No. 5,234,638)" is respectfully traversed.

SECTION 102 OBJECTIONS

The examiner has rejected claims 1-3 per 35 USC §102 per Ebihara, a Japanese patent pursuant to the abstract and a machine-interpreted translation.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik GmbH v. American Boist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984)

The Examiner indicates that the patent to Ebihara, per the machine translation, appears to have all the elements of applicant's original claim 1. The accuracy of the translation is unknown to applicant. However, the die of the present invention of claim 1 is structurally different from the die disclosed in the translation of Ebihara et al. in its structure as described below.

In Ebihara et al., there are the following descriptions concerning the die;

a) "a part of a mesh structure is compressed by a first die in a thickness direction for molding the structure into a predetermined shape, then the other parts of the mesh structure is further compressed by a second die in a lateral direction for forming the mesh structure into the predetermined shape." (Claim 8);

b) "the mesh structure 11 is formed into a predetermined three-dimensional shape by using a cushion body forming device 50 illustrated in Fig. 1. This cushion body forming device 50 comprises a die 51, a heater 52 and an air blower 53 or the like. The die 51 is so-called a simplified aluminum die made of aluminum alloy or the like. The die 51 comprises an upper die 56 and a

lower die 55, further the dies 55, 56 have a plurality of air holes 60, 61 such as punching metals, respectively." (Paragraph [0024]);

c) "The mesh structure 11 is placed in the die 51 then the mesh structure 11 is compressed into a half thickness in the thickness direction (a surface direction) by closing the lower die 55 and the upper die 56. The thickness direction used herein is a direction orthogonal to a direction of which continuous filament bodies 12 of the mesh structure 11 are arranged in series (a direction indicated by an arrow B in Fig. 3)" Paragraph [0025] ;

d) "a die 81 of the molding device 80 includes a lower die 82, an upper die 83, and a side die, respectively made of aluminum alloy or the like. The side die 84 is inserted between the lower die 82 and the upper die 83." (Embodiment 2 in Paragraph [0031]); and

e) "As illustrated in Fig. 4, firstly, in the first compressing process, mainly a center 11a (a main part) of the mesh structure 11 is compressed into a half thickness in the thickness direction (a direction indicated by an arrow B in Fig. 3). Then, as shown in Fig. 5, in the second compressing process, left and right side portions 11b are compressed into a half thickness in the lateral direction (a direction indicated by an arrow A in Fig. 3)." (Paragraph [0032]).

With reference to the above descriptions a) to e), in Ebihara et al., there is neither disclosure nor suggestion or a teaching of the following elements described in the present invention;

(1) A male die is constituted with a base which forms a part of the product.

(2) The male die consisted of a base which forms a part of the product is inserted in a female die by a length of a predetermined stroke, then the three-dimensional structure is compressed to a thickness corresponding to the length of the stroke of the male-die inserted in the female-die.

Thus, Ebihara fails to teach each and every element of the claimed invention of Applicant, arranged as in the claims of the present invention. As such, the objection per Ebihara is respectfully traversed.

SECTION 103

Claim 1 having elements not found in Ebihara, any combination therewith would also lack elements of the claimed invention. Consequently the objection pursuant to section 103 is respectfully traversed.

Final Remarks

Applicant considers the disclosed method for producing a cushion material composed of a resin molded article having a spring structure a significant advance in the art. However, even if the Applicant's claimed method for production of cushion material a great advance, it has been established that one should not be deprived of patent protection where it can be shown that a genuine improvement has been made, on comparison with other intentions in the art, *even if the improvement lacks the appearance of a great advance in the art.* In re Lange, 128 USPQ 365, the CCPA on page 367 states that:

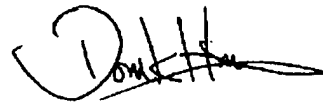
"We think that the present application is a distinct improvement of Jezalik and represents an advance in the art not obvious, having patentable novelty. The art is a crowded and comparatively simple on and in such an art, great advances are not to be expected. However patentability will not be denied to an invention which accomplishes a small, but nevertheless genuine improvement not though of by others.."

Further, the CCPA in the case of re Meng and Driessen, 181 USPQ 94, on page 97, reiterated the principal that even though the invention seems a simple advance over prior art, *after the fact*, simplicity, argues *for*, rather than against patentability.

Considering that Applicant's method for producing a cushion material has elements neither taught or suggested in the cited prior art, and, considering that even minor improvements in the art, argue *for* patentability, the remaining claims of the patent should now be allowable.

Should the Examiner have any further questions or concerns the Examiner wishes to address by Examiner's amendment by telephone or otherwise, or should the Examiner have suggestions to more clearly define the subject matter of the claims to more clearly define the patentable subject matter, the Applicant's attorney would be most receptive to such.

Respectfully submitted,



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